SEQUENCE LISTING

<110> Kaneka Corp.
OKUBO, Yuji
MATSUMOTO, Keiji
TAKAGI, Masamichi
OHTA, Akinori

<120> NOVEL TRANSFORMANT AND PROCESS FOR PRODUCING POLYESTER USING THE SAME

<130> Q96497

<150> PCT/JP2005/003589
<151> 2005-03-03

<150> JP 2004-061291
<151> 2004-03-04

<150> JP 2004-062812
<151> 2004-03-05

<160> 39

<170> PatentIn version 3.3

<210> 1
<211> 102
<212> DNA
<213> Artificial Sequence

<220>
<223> chemically-synthesized restriction enzyme cleavage site

<400> 1
aagctgcggc cgcagcttgc atgcctgcag gtcgactcta gaggatcctc gaggatcccc 60

gggtacgcta gcgtaccgag ctatccattt aaatccgaat tc 102

<210> 2
<211> 1785
<212> DNA
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<220>
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<400> 2
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ttggctatgg ctaaagctca aaccgaaaga actgctcaag ccttgttgca aactaacttg 120

gatgatttgg gtcaagtttt ggaacaaggt tctcaacaac catggcaatt gattcaagct 180

caaatgaatt ggtggcaaga tcaattaaaa ttgatgcaac acactttgtt aaaatctgct 240

ggtcaaccat ctgaaccagt tattactcca gaaagatctg atagaagatt taaagctgaa 300

gcttggtctg aacaaccaat ttatgattac ttaaaacaat cctatttgtt aactgctaga 360

catttgttgg cttctgttga tgctttggaa ggtgtcccac aaaaatctag agaaagattg 420

agattcttta ctagacaata cgtctccgct atggctccat ctaatttctt ggctactaac 480

ccagaattgt taaaattgac tttggaatcc gatggtcaaa atttggttag aggtttggct 540

ttattggctg aagatttgga aagatctgct gatcaattaa acattagatt gactgatgaa 600

tccgcttttg aattaggtag agatttggct ttgactccag gtagagttgt tcaaagaact 660

gaattatatg aattaattca atactctcca actactgaaa ccgttggtaa aaccccagtt 720

ttgatcgttc caccattcat taataaatat tacattatgg atatgagacc acaaaactcc 780

ttggtcgctt ggttggtcgc tcaaggtcaa accgttttca tgatttcctg gagaaaccca 840

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ggtggtaccg ctttgtcttt agctatgggt tggttggccg ccagaagaca aaaacaaaga 1020

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atttttattc atgaaccaat tatcgccgcc ttagaagccc aaaatgaagc taaaggtatt 1140

atggatggta gacaattggc cgtctccttc tctttgttga gagaaaactc tttatattgg 1200

aattactata ttgattctta cttaaaaggt caatctccag ttgcttttga tttgttgcac 1260

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ggtaaagtta aaactccagt tttgttggtt tctgccgttg atgatcacat tgctttatgg 1440

caaggtacct ggcaaggtat gaaattgttc ggtggtgaac aaagattttt attggccgaa 1500

tccggtcata ttgctggtat tattaatcca ccagctgcta acaaatacgg tttctggcac 1560

aatggtgctg aagctgaatc tccagaatct tggttggctg gtgccaccca tcaaggtggt 1620

tcctggtggc cagaaatgat gggttttatt caaaacagag atgaaggttc tgaaccagtc 1680

ccagccagag tcccagaaga aggtttggct ccagctccag gtcactatgt caaagttaga 1740

ttaaacccag ttttcgcttg tccaaccgaa gaagatgctg cttaa 1785

<210> 3
<211> 741
<212> DNA
<213> Artificial Sequence

<220>
<223> chemically synthesized polynucleotide encoding Ralstonia eutropha phbB for expression in Candida maltosa

<400> 3
atgactcaaa gaattgccta cgttactggt ggtatgggtg gtattggtac tgctatttgt 60

caaagattgg ctaaagatgg ttttagagtt gttgctggtt gtggtccaaa ctctccaaga 120

agagaaaaat ggttggaaca acaaaaagct ttgggtttcg attttattgc ttctgaaggt 180

aatgttgctg attgggattc tactaaaact gctttcgata aagtcaaatc cgaagtcggt 240

gaagttgatg ttttgattaa caatgctggt attactagag atgttgtttt tagaaaaatg 300

actagagctg attgggatgc cgttattgat actaacttga cttctttgtt caatgtcact 360

aaacaagtta ttgatggtat ggctgataga ggttggggta gaattgtcaa catttcttct 420

gttaatggtc aaaaaggtca atttggtcaa actaactatt ccactgctaa agctggtttg 480

catggtttca ctatggcttt ggcccaagaa gttgccacta aaggtgttac tgtcaatacc 540

gtctctccag gttacattgc tactgatatg gtcaaagcca ttagacaaga tgttttagat 600

aaaattgtcg ccaccattcc agtcaaaaga ttgggtttgc cagaagaaat tgcttctatt 660

tgtgcttggt tgtcttctga agaatccggt ttttctactg gtgctgattt ctctttaaac 720

ggtggtttgc acatgggtta a 741

<210> 4
<211> 754
<212> DNA
<213> Artificial Sequence

<220>
<223> chemically-synthesized promoter with multiple alkane responsible regions

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tgtgcttttt tttttgtttt caatttgaaa gtttttttat ttccgcaata caaaattatt 120

ttttatccgc tcatgtgctt tttttttgt tttcaatttg aaagtttttt tatttccgca 180

atacaaaatt atttttatc cgctgaccca gatcctctag agtccatgtg ctttttttt 240

tgttttcaat ttgaaagttt ttttatttcc gcaatacaaa attatttttt atccgctcat 300

gtgcttttt ttttgttttc aatttgaaag tttttttatt tccgcaatac aaaattattt 360

tttatccgct gacccagatc ctctagagtc catgtgcttt tttttttgtt ttcaatttga 420

aagttttttt atttccgcaa tacaaaatta ttttttatcc gctcatgtgc ttttttttt 480

gttttcaatt tgaaagtttt tttatttccg caatacaaaa ttatttttta tccgctgacc 540

cagatctcga ctctagagga tccccgtttt tttatttccg caatacaaaa ttatttttta 600

tccgctttcc gttccttttct tcttgtgata aatctcaaca attatatata tcattccata 660

accctgaata attttttttt taagtccttg gtttcttttt ttagaaaaaa aggtgaatca 720

gtaaaatttt tgttatttat cattttaact caca 754

<210> 5
<211> 594
<212> PRT
<213> Aeromonas caviae

<400> 5

Met Ser Gln Pro Ser Tyr Gly Pro Leu Phe Glu Ala Leu Ala His Tyr
1 5 10 15

Asn Asp Lys Leu Leu Ala Met Ala Lys Ala Gln Thr Glu Arg Thr Ala
20 25 30

Gln Ala Leu Leu Gln Thr Asn Leu Asp Asp Leu Gly Gln Val Leu Glu
35 40 45

Gln Gly Ser Gln Gln Pro Trp Gln Leu Ile Gln Ala Gln Met Asn Trp
50 55 60

Trp Gln Asp Gln Leu Lys Leu Met Gln His Thr Leu Leu Lys Ser Ala
65 70 75 80

Gly Gln Pro Ser Glu Pro Val Ile Thr Pro Glu Arg Ser Asp Arg Arg
85 90 95

Phe Lys Ala Glu Ala Trp Ser Glu Gln Pro Ile Tyr Asp Tyr Leu Lys
100 105 110

Gln Ser Tyr Leu Leu Thr Ala Arg His Leu Leu Ala Ser Val Asp Ala
115 120 125

Leu Glu Gly Val Pro Gln Lys Ser Arg Glu Arg Leu Arg Phe Phe Thr
130 135 140

Arg Gln Tyr Val Asn Ala Met Ala Pro Ser Asn Phe Leu Ala Thr Asn
145 150 155 160

Pro Glu Leu Leu Lys Leu Thr Leu Glu Ser Asp Gly Gln Asn Leu Val
165 170 175

Arg Gly Leu Ala Leu Leu Ala Glu Asp Leu Glu Arg Ser Ala Asp Gln
180 185 190

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Leu Asn Ile Arg Leu Thr Asp Glu Ser Ala Phe Glu Leu Gly Arg Asp
        195                 200                 205

Leu Ala Leu Thr Pro Gly Arg Val Val Gln Arg Thr Glu Leu Tyr Glu
    210                 215                 220

Leu Ile Gln Tyr Ser Pro Thr Thr Glu Thr Val Gly Lys Thr Pro Val
225                 230                 235                 240

Leu Ile Val Pro Pro Phe Ile Asn Lys Tyr Tyr Ile Met Asp Met Arg
                245                 250                 255

Pro Gln Asn Ser Leu Val Ala Trp Leu Val Ala Gln Gly Gln Thr Val
            260                 265                 270

Phe Met Ile Ser Trp Arg Asn Pro Gly Val Ala Gln Ala Gln Ile Asp
        275                 280                 285

Leu Asp Asp Tyr Val Val Asp Gly Val Ile Ala Ala Leu Asp Gly Val
    290                 295                 300

Glu Ala Ala Thr Gly Glu Arg Glu Val His Gly Ile Gly Tyr Cys Ile
305                 310                 315                 320

Gly Gly Thr Ala Leu Ser Leu Ala Met Gly Trp Leu Ala Ala Arg Arg
                325                 330                 335

Gln Lys Gln Arg Val Arg Thr Ala Thr Leu Phe Thr Thr Leu Leu Asp
            340                 345                 350

Phe Ser Gln Pro Gly Glu Leu Gly Ile Phe Ile His Glu Pro Ile Ile
        355                 360                 365

Ala Ala Leu Glu Ala Gln Asn Glu Ala Lys Gly Ile Met Asp Gly Arg
    370                 375                 380

Gln Leu Ala Val Ser Phe Ser Leu Leu Arg Glu Asn Ser Leu Tyr Trp
385                 390                 395                 400

Asn Tyr Tyr Ile Asp Ser Tyr Leu Lys Gly Gln Ser Pro Val Ala Phe
                405                 410                 415

Asp Leu Leu His Trp Asn Ser Asp Ser Thr Asn Val Ala Gly Lys Thr
            420                 425                 430
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His Asn Ser Leu Leu Arg Arg Leu Tyr Leu Glu Asn Gln Leu Val Lys
        435                 440                 445

Gly Glu Leu Lys Ile Arg Asn Thr Arg Ile Asp Leu Gly Lys Val Lys
    450                 455                 460

Thr Pro Val Leu Leu Val Ser Ala Val Asp Asp His Ile Ala Leu Trp
465                 470                 475                 480

Gln Gly Thr Trp Gln Gly Met Lys Leu Phe Gly Gly Glu Gln Arg Phe
                485                 490                 495

Leu Leu Ala Glu Ser Gly His Ile Ala Gly Ile Ile Asn Pro Pro Ala
            500                 505                 510

Ala Asn Lys Tyr Gly Phe Trp His Asn Gly Ala Glu Ala Glu Ser Pro
        515                 520                 525

Glu Ser Trp Leu Ala Gly Ala Thr His Gln Gly Gly Ser Trp Trp Pro
    530                 535                 540

Glu Met Met Gly Phe Ile Gln Asn Arg Asp Glu Gly Ser Glu Pro Val
545                 550                 555                 560

Pro Ala Arg Val Pro Glu Glu Gly Leu Ala Pro Ala Pro Gly His Tyr
                565                 570                 575

Val Lys Val Arg Leu Asn Pro Val Phe Ala Cys Pro Thr Glu Glu Asp
            580                 585                 590

Ala Ala
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<210> 6
<211> 246
<212> PRT
<213> Ralstonia eutropha

<400> 6

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Met Thr Gln Arg Ile Ala Tyr Val Thr Gly Gly Met Gly Gly Ile Gly
1               5                   10                  15

Thr Ala Ile Cys Gln Arg Leu Ala Lys Asp Gly Phe Arg Val Val Ala
            20                  25                  30

Gly Cys Gly Pro Asn Ser Pro Arg Arg Glu Lys Trp Leu Glu Gln Gln
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        35                  40                  45

Lys Ala Leu Gly Phe Asp Phe Ile Ala Ser Glu Gly Asn Val Ala Asp
    50                  55                  60

Trp Asp Ser Thr Lys Thr Ala Phe Asp Lys Val Lys Ser Glu Val Gly
65                  70                  75                  80

Glu Val Asp Val Leu Ile Asn Asn Ala Gly Ile Thr Arg Asp Val Val
                85                  90                  95

Phe Arg Lys Met Thr Arg Ala Asp Trp Asp Ala Val Ile Asp Thr Asn
            100                 105                 110

Leu Thr Ser Leu Phe Asn Val Thr Lys Gln Val Ile Asp Gly Met Ala
        115                 120                 125

Asp Arg Gly Trp Gly Arg Ile Val Asn Ile Ser Ser Val Asn Gly Gln
    130                 135                 140

Lys Gly Gln Phe Gly Gln Thr Asn Tyr Ser Thr Ala Lys Ala Gly Leu
145                 150                 155                 160

His Gly Phe Thr Met Ala Leu Ala Gln Glu Val Ala Thr Lys Gly Val
                165                 170                 175

Thr Val Asn Thr Val Ser Pro Gly Tyr Ile Ala Thr Asp Met Val Lys
            180                 185                 190

Ala Ile Arg Gln Asp Val Leu Asp Lys Ile Val Ala Thr Ile Pro Val
        195                 200                 205

Lys Arg Leu Gly Leu Pro Glu Glu Ile Ala Ser Ile Cys Ala Trp Leu
    210                 215                 220

Ser Ser Glu Glu Ser Gly Phe Ser Thr Gly Ala Asp Phe Ser Leu Asn
225                 230                 235                 240

Gly Gly Leu His Met Gly
                245
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<211> 2196
<212> DNA
<213> Artificial Sequence

<220>
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ggtcttttgc ttttcactcc aaaaatggaa acacgcgcgg ctcaactcga aatccgtgat 120

caaaaaaata aaggctgtga gtttcgagcc aataattatg aattagtggt attttttta 180

aagataaata atcaagaatc gcattaggga gacgaatatg cgttattcaa ataaaaagac 240

aattctttta gggtagcatt tcccttcaag ttcatcccac atgtacatta atgtcaatga 300

tgtcgcagaa gttaaattag cagaagaaaa aaaaaatgtg aattactccg agtcaactct 360

tctttctctt cttctttttc ttctttatca ccataatcac caccaccacc accaccacca 420

gctcccagat gacttcaact aacttagaag gaactttccc attgattgcc aaaggtaaag 480

tcagagatat ttaccaagtt gacgacaaca ctcttttatt cgttgctact gatagaattt 540

ccgcatacga tgtgattatg tctaatggta tcccaaataa aggtaaaatc ttaaccaaat 600

tgtctgaatt ctggtttgat ttcttgccaa ttgaaaacca tttaatcaaa ggagacattt 660

tccaaaaata tcctcaacta gaaccatata gaaaccaatt ggaaggcaga tccttacttg 720

ttagaaaatt gaaattgatc cctcttgaag ttattgttag aggttacatc accggttccg 780

gctggaaaga ataccaaaaa tctaaaaccg tccacggtat tcctattggt gatgtggttg 840

aatcacaaca aatcactcct atcttcaccc catccactaa agcagaacaa ggtgaacatg 900

atgaaaatat caccaaagaa caagctgaca agattgttgg aaaagaatta tgtgatagaa 960

ttgaaaaaat tgctattgat ttgtacacca aagccagaga ttacgctgcc actaaaggaa 1020

ttattatcgc tgatactaaa tttgaatttg gtttagatgg tgacaacatc gttcttgttg 1080

acgaagtttt aactccagat tcttccagat tctggaatgc tgctaaatac gaagttggta 1140

aatctcaaga ctcttacgat aaacaatttt tgagagattg gttaacttct aatggtgttg 1200

ctggtaaaga tggtgttgct atgcctgaag acattgtcac tgaaaccaag agcaaatacg 1260

ttgaagctta cgaaaattta actggtgaca aatggcaaga ataaattaag gatatctatt 1320

attaaagctt tctatttatc ccaaactttc gtagtatttt ctgacatgtt cagatgtttt 1380

tactttatct ttcctgaaat ttttgatttc taaccgactc ttgcatgtag ctcttgataa 1440

tgcaacatat gcttgaccat tagcaaaact tctacctaaa tctattttga ctctgtccaa 1500

agtttgacct tgagctttgt ggatcgacat cgcccacgac aagatcattt ggtttgttct 1560

cgagtaacag tatgattttt ttccctctcc cgtcgattga ggtttttttt ttctctttcg 1620

tcttggtctt ttgcttttca ctccaaaaat ggaaacacgc gcggctcaac tcgaaatccg 1680

tgatcaaaaa ataaaggct gtgagtttcg agccaataat tatgaattag tggtattttt 1740

tttaaagata aataatcaag aatcgcatta gggagacgaa tatgcgttat tcaaataaaa 1800

agacaattct tttagggtag catttccctt caagttcatc ccacatgtac attaatgtca 1860

atgatgtcgc agaagttaaa ttagcagaag aaaaaaaaaa tgtgaattac tccgagtcaa 1920

ctcttctttc tcttcttctt tttcttcttt atcaccataa tcaccaccac caccaccacc 1980

accagctccc agatgacttc aactaactta gaaggaactt tcccattgat tgccaaaggt 2040

aaagtcagag atatttacca agttgacgac aacactcttt tattcgttgc tactgataga 2100

atttccgcat acgatgtgat tatgtctaat ggtatcccaa ataaaggtaa aatcttaacc 2160

aaattgtctg aattctggtt tgatttcttg ccaatt 2196

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<213> Artificial Sequence

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<223> chemically-synthesized PCR primer

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<210> 9
<211> 30
<212> DNA
<213> Artificial Sequence

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<400> 9
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<210> 10
<211> 35
<212> DNA
<213> Artificial Sequence

<220>
<223> chemically-synthesized PCR primer

<400> 10
aattgcatgc cagtactttt ttgtgtaaca ttcac 35

<210> 11
<211> 30
<212> DNA
<213> Artificial Sequence

<220>
<223> chemically-synthesized PCR primer

<400> 11
aattgtcgac atgaaaagtc gtcgattatg 30

<210> 12
<211> 30
<212> DNA
<213> Artificial Sequence

<220>
<223> chemically-synthesized PCR primer

<400> 12
aattgctagc caaggggttt gttgatgttg 30

<210> 13
<211> 38
<212> DNA
<213> Artificial Sequence

<220>
<223> chemically-synthesized PCR primer

<400> 13
ttaattaatt taaataattt cgaagattac gatgaagt 38

<210> 14
<211> 34
<212> DNA
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<220>
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<400> 14
aattgtcgac taacagtatg atttttttcc ctct 34

<210> 15
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<400> 15
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<210> 16
<211> 34
<212> DNA
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<400> 16
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<210> 17
<211> 31
<212> DNA
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<220>
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<400> 17
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<210> 18
<211> 31
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<210> 19
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<210> 21
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<212> DNA
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<220>
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<400> 21
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<210> 22
<211> 24
<212> DNA
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<220>
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<400> 22
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<210> 23
<211> 24
<212> DNA
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<220>
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<400> 23
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<210> 24
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<220>
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<400> 24
taacagtatg atttttttcc ctct 24

<210> 25
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<220>
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<400> 25
aacaaaccaa atgatcttgt cgtg 24

<210> 26
<211> 38
<212> DNA
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<400> 26
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<210> 27
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<212> DNA
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<220>
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<400> 27
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<210> 28
<211> 83
<212> DNA
<213> Artificial Sequence

<220>
<223> chemically-synthesized linker

<400> 28
gtccttggtt tctttttta gaaaaaaagg tgaatcagta aaatttttgt tatttatcat 60

tttaactcac atatgaagat atc 83

<210> 29
<211> 99
<212> DNA
<213> Artificial Sequence

<220>
<223> chemically-synthesized PCR primer

<400> 29
acacatatgt ctcaaccatc ttatggtcca ttgttcgaag ctttggctca ttacaatgat 60

aaattgttgg ctatggctaa agctcaaacc gaaagaact 99

<210> 30
<211> 45
<212> DNA
<213> Artificial Sequence

<220>
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<400> 30
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<210> 31

<211> 22
<212> DNA
<213> Artificial Sequence

<220>
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<400> 31
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<210> 32
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<220>
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<400> 32
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<210> 33
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<213> Artificial Sequence

<220>
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<400> 33
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<210> 34
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<210> 35
<211> 22
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<220>
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<400> 35
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<210> 36

<211> 31
<212> DNA
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<220>
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<210> 37
<211> 46
<212> DNA
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<220>
<223> chemically-synthesized PCR primer

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